

Amendments to the Specification

Please amend paragraph beginning at line 19 of page 4 as follows:

In addition, if an IB device cannot consume data as fast as the data is being transmitted to it, the device's buffering resources may become used up. In this instance, the device must employ link level flow control on one or more of its ports to avoid losing packets. For example, if many data packets are coming in on several ports of an IB switch and all are addressed to the same destination port on the switch, then the destination port may become a bottleneck. ~~Since~~ Since the incoming packets cannot be drained out of the destination port as fast as they are coming in from the other ports, the buffering resources within the switch may soon be used up. Thus, no more free buffers will be available to receive incoming packets. In this case, the incoming ports must employ link level flow control to stop their link partners from transmitting packets until additional buffers become free. This situation results in less than full utilization of the potential bandwidth on the links coupled to the incoming ports.

Please replace the Abstract with the following:

A method and system for over-advertising buffering resources for buffering packets coming into an Infiniband port is disclosed. At least two IB data packets worth of flow control credits are advertised to the link partner for each virtual lane configured on the port so the link partner may transmit packets at essentially full link bandwidth. The number of credits advertised may be greater than actual amount of buffering resources available to receive all advertised packets. Once the actual amount of buffering resources available is less than a predetermined shutdown latency threshold, the port transmits zero credit flow control packets for each virtual lane to shutdown the link partner from transmitting more packets. In one embodiment, an inline spill buffer is coupled between the port and shared buffers. The predetermined shutdown latency threshold is when all the shared buffers are in use. The inline spill buffer is sized to store all packets transmitted by the link partner during the shutdown latency. One embodiment has no inline spill buffer, and the predetermined threshold is a reserved amount of the shared buffers large enough to store all packets transmitted by the link partner during the shutdown latency.